

REMARKS

I. Introduction

Claim 1 is pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Rejection of Claim 1 Under 35 U.S.C. § 103(b)

Claim 1 was previously rejected as being unpatentable under 35 U.S.C. §103(a) over U.S. Patent No 4,496,583 ("Yamamoto") in view of either U.S. Patent No. 5,232,595 ("Meyer") or U.S. Patent No. 4,876,007 ("Narou") and U.S. Patent No. 2,862,542 ("Norton"), and further in view of U.S. Patent No. 4,772,443 ("Thornton et al."), U.S. Patent No. 5,492,580 and German Patent No. 4,024,053 A1 (collectively "Frank") and U.S. Patent No. 3,616,167 ("Gosden"). Applicant respectfully submits that the combination of Yamamoto, Meyer, Narou, Norton, Thornton et al., Frank and Gosden does not render obvious the present claims for the following reasons.

Claim 1 relates to a method for manufacturing a pleated filter material from a thermally bonded non-woven fabric. Claim 1 recites that the method includes the step of forming a single fibrous web from undrawn and drawn synthetic fibers. In addition, claim 1 recites that the method includes the step of **preheating** the fibrous web. As amended herein without prejudice, claim 1 recites that the method includes the step of **calendering the single fibrous web between sinusoidally profiled calender rolls in a single calendering step without subsequent re-heating, the sinusoidally profiled calender rolls heated to a temperature up to the melting point of the undrawn fibers**. Support for this amendment may be found, for example, at page 3, line 37 to page 4, line 3 and at page 4, lines 20 to 24 of the Specification. Claim 1 further recites that, during the single calendering step, the undrawn fibers in the single fibrous web form bonds in a tension-free manner between non-heated profiled calender rolls to form the non-woven fabric. Claim 1 also recites that the bonds of the non woven fabric are of equal strength over its cross-section. Claim 1 also recites that the non woven fabric is formed without the use of flat bonding. In addition, claim 1 recites that, during the single calendering step, spacers are formed in the non-woven fabric to thereby form the filter material.

Applicant respectfully submits that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden does not render obvious claim 1 for at least the reason that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden fails to teach or suggest, either separately or in combination, all of the limitations recited in claim 1. For example, the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden fails to teach or suggest, either separately or in combination, a method for manufacturing a pleated filter material wherein a fibrous web is both preheated and calendered between calender rolls that are heated to a temperature up to the melting point of the undrawn fibers. In this regard, it is noted that Frank discloses a method wherein a nonwoven structure is preheated and subsequently passed through “a pair of pinch rollers 22, 24 which are maintained preferably at a temperature below the melting point of the resin so as to assist in cooling of the resin.” Col. 5, lines 25 to 43 (emphasis added). In this regard, Frank discloses a preheated nonwoven structure and non-heated pinch rollers.

Moreover, the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden fails to teach or suggest, either separately or in combination, a method for manufacturing a pleated filter material that includes the step of calendering the single fibrous web between sinusoidally profiled calender rolls in a single calendering step without subsequent re-heating, the sinusoidally profiled calender rolls heated to a temperature up to the melting point of the undrawn fibers. In this regard, it is respectfully submitted that Norton teaches away from heating the profiled rolls such as those depicted at Figure 2 of Norton. For example, Norton states that “[t]he wetting of the roll surfaces may be enhanced by cooling the rolls with a cooling medium therein.”

In view of the foregoing, it is respectfully submitted that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden does not disclose, or even suggest, all of the features of the present claims. As such, it is respectfully submitted that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden does not render unpatentable the present claims. Accordingly, withdrawal of the present rejection is respectfully requested.

III. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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